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PHOTOGRAPHS FROM TOURS OF ASHLAND PERFORMANCE MATERIALS DURING MARCH, 2011 SECTION MEETING

By Steve Rosenthal





MEETING NOTICE

Columbus Section of the American Chemical Society, Inc.

<http://columbus.sites.acs.org>

*High School Materials Science Courses
as a STEM Integrator and Motivator*

GLENN S. DAEHN

Department of Materials Science and Engineering
The Ohio State University

Thursday, April 14, 2011

The Clintonville Woman's Club
3951 North High Street
Columbus, OH 43214
614-268-5525

PROGRAM DETAILS

5:00-6:00PM	Executive Committee Meeting (Library), open to all Section members. . .
6:00-6:45 PM	Social Hour (appetizers)
6:45-7:30 PM Dinner	Dinner Choices: All include rolls, butter, and beverage service (coffee, hot tea, and iced tea) Mixed Field Greens with Seasonal Fruit. Select one Entrée: Beef Short Ribs – Slow roasted Black Angus Beef Herb-Stuffed Fish – Tilapia baked in clam sauce with seasoned bread crumbs OR Chicken Rothschild – Breast of chicken in a Raspberry – Dijon Sauce Assorted Dessert Buffet
7:30-8:30 PM	Glenn Daehn, High School Materials Science Courses as a STEM Integrator and Motivator
Cost	\$25 per person members and non-members, \$20 for retired and unemployed members, \$10 per student. Payment will be collected at the door; cash and checks accepted. <i>Remember that this is a dinner order and must be paid. Please help control costs by honoring your order.</i>
RSVP	Please use the voice mail reservations service by calling 614-447-3600 extension 7047. Follow the template for reservations*. Alternatively, please send e-mail with the same information to The Columbus Section at the following e-mail address: acscols@earthlink.net or use the Meeting Reservation Form on the Section website.
*Voicemail/e-mail Reservations Template	<ul style="list-style-type: none"> • First and last name: Please spell last name. • Membership category: member, high school teacher, non-member, retired, emeritus, unemployed, student, other. • Dinner selection (beef, fish, or chicken) • Employer • Your phone number, in case we need to contact you.
Reservation Deadline	Friday, April 8, 2011 at noon.

Program Contact	Karen Irving , 614-292-1229; irving.8@osu.edu
Directions & Parking	The Clintonville Woman's Club (3951 North High Street) is located on the west side of North High Street just north of the Whetstone Library. The building sits behind a church and is not easy to see from High Street. The driveway leading to the Woman's Club has a white sign identifying the Club and is located opposite Northridge Drive. Ample free parking is available behind the Club building. Visit their website for information about the site. http://www.clintonvillewomansclub.com/index.html
	<p style="text-align: center;">ABOUT THE SPEAKER: GLENN S. DAHN</p> <p>Glenn S. Daehn is a Professor in the Department of Materials Science and Engineering at The Ohio State University and is designated the Mars G. Fontana Professor of Metallurgical Engineering. His research group has been actively developing electromagnetic metal forming technologies for the past 20 years. He is one of the founding members and Chair of the International Impulse Forming Group. He also has research interests in the high temperature creep deformation of solids, the reactive processing of ceramics to create ceramic-metal composites. One long-term theme in his work is using unusual mechanics or reactions to open new paths to manufacturing processes. Daehn was named a National Young Investigator by NSF, was recipient of the Hardy Medal of TMS (1992), and named a Fellow of ASM in 2010. Daehn's academic training includes a BS from Northwestern University (1983), and MS and PhD degrees from Stanford University (1987), all in Materials Science and Engineering.</p> <p>Professor Daehn has also been interested in engaging university assets to improve the local technical and economic environment. Accordingly he has been engaged in promoting the development of materials science courses in high schools; he served as the first director of the Ohio Manufacturing Institute; and will become director of the Honda-OSU partnership in April. More complete background can be found at www.mse.osu.edu/~daehn.</p>
<p style="text-align: center;">ABOUT THE TOPIC: <i>HIGH SCHOOL MATERIALS SCIENCE COURSES AS A STEM INTEGRATOR AND MOTIVATOR</i></p> <p>Over the past two decades a high school materials science curriculum has organically nucleated, evolved and taken root in a number of high schools. The ASM Materials Education Foundation with numerous partners including Ohio State University and Battelle are now working to improve the content in, and accelerate the acceptance of, high school materials science courses. ASM Materials Camps for Teachers provide 40 hours of materials science instruction to high school teachers at no cost. In 2009 over 600 teachers completed camps in more than 20 locations nationwide. This provides an extraordinarily powerful platform from which to bring new ideas into high school teaching. In recent years the focus has moved from building teacher awareness in materials science to seeding full semester and year-long materials science courses. These courses can be taught in several ways depending upon local needs and they have a track record in motivating students towards STEM careers. Further, the content provides a bridge between chemistry and useful and desirable products. This provides clear connections between the often separately-developed topics of Science, Technology, Engineering and Mathematics.</p> <p>This broad project has a long history with many collaborators and contributors. Two open-access documents are at the core of the current program: a manual of low-cost, high-content experiments developed at PNNL in the 1990's, and a compilation of readings and lab exercises that follow the course was developed by high school teachers who repeatedly act as instructors in the program; Andy Nydam and Debbie Goodwin led this effort.</p> <p>This presentation will describe the status and long-term potential of the program and suggest opportunities for others in high school and academic materials communities to become engaged.</p>	

CHEMISTS CELEBRATE EARTH DAY 2011

By Steven Rosenthal, Immediate Past Chair



As part of the [Chemists Celebrate Earth Day](#) (CCED), the Columbus Section will have a booth at the Earth Day Celebration on Saturday, April 23, 2011 in Franklin Park. This year is the International Year of Chemistry ([IYC 2011](#)), which was designated by the UN. The theme for the second quarter of IYC 2011 is energy and it features viable alternative energy sources as a key component of sustainability. We will be doing hands-on activities at the booth and distributing *Celebrating Chemistry Energy – It's Everywhere* literature. The literature includes articles written by **Jeff Trent** of Boehringer Ingelheim Roxane Laboratories, Inc. and **Scott Cummings**, Professor of Chemistry, Kenyon College. We need your assistance to run the booth. Please contact [Steve Rosenthal](#) or [Jeff Trent](#), if you are interested in volunteering for our booth.

The local Earth Day activities are being coordinated by [Green Columbus](#), a local non-profit organization. The theme for Green Columbus' Earth Day is "Lighten Up", which was inspired by the name of a song by the Beastie Boys. More information about the [Lighten Up 2011](#) can be found at their website. According to the website, Central Ohio rallies the most volunteers for Earth Day service projects in the country. For Earth Day 2010, there were over 3,600 volunteers on the weekend putting in 13,000 person-hours at 129 worksites planting over 8,000 trees and 5,000 native plants, collecting over 2,000 bags of trash, creating or reviving almost 50 community gardens and more.



There are two parts to Earth Day 2011: *Lighten Up...the Worksite Weekend* (chock full of community service projects) and the Celebration. Though there are just two parts, there are a number of ways to get involved.

The community service projects part will be held on April 16 and 17. [Metro Parks](#) is working with Green Columbus in hosting worksites for volunteers to sign up and help improve our environment. Please see the individual park listings for more information. Advance registration only. Registration is online only through the Lighten Up 2011 website. The following parks are participating: Battelle Darby Creek, Blacklick Woods, Blendon Woods, Glacier Ridge Highbanks, Pickerington Ponds, Prairie Oaks, Sharon Woods, and Three Creeks (for Walnut Woods). Here are some of the things you can do.

- **[VOLUNTEER](#) at a community worksite and/or the celebration** (FREE, and you get [sweet perks](#)) – Volunteer registration for Earth Day worksites scheduled for Saturday, April 16 and Sunday, April 17 will open **March 15**. Once you are registered, you may select the service project of your choice and sign up for one or more shifts. (Don't worry, we will never share or sell your info.) *Volunteer registration will close at noon on April 15.*
- **[REGISTER A SERVICE PROJECT](#) (Be a Worksite Host)** – This too, is FREE with perks. If you have a "pet project" (like a community garden or a habitat to restore) or a "pet peeve" (like all that litter along your favorite road or river), register to be a worksite host and get 'er done. See [Worksite Weekend FAQs](#) here for details. Worksite registration is **NOW OPEN**. Use your 2010 login or create a new profile. *Worksite registration closes April 5.*
- **[HELP PLANT TREES](#)** – The average American uses the equivalent of one 100-foot tall, 16-inch diameter tree every year for their paper and wood product needs. Plus, they're awesome at cleaning our drinking water, preventing floods, lowering the temperature, soaking up carbon, and dancing a jig under the full moon.
- **[SPONSOR EARTH DAY 2011](#)** – While much can be accomplished by dedicated volunteers they don't bring home the free-range bacon. Worksite and Event Level sponsors help get the job done and get a bunch of benefits in return. (Worksite sponsorships start at \$300.)

- **RESERVE BOOTH SPACE** – If you've got a "green," streak...be seen! This is a not-to-be-missed chance to connect with those who are most interested in YOUR interests whether you're a **business** with a green product or service to sell; or a **non-profit or community group** with a green vision. (BTW, discounts are available for worksite sponsors and hosts). Booths registered by April 15 will be on the map. Contact Lynn Stan at lynn.stan@gmail.com for details.
- **SELL YOUR ART or CRAFTS** – NEW! If you create upcycled or otherwise eco-friendly art or cool crafts...apply for your chance to get it in front of 10,000 people at the celebration.
- **SAVE THE DATE** – The [Celebration](#) is scheduled for Saturday, April 23 from 11am to 10pm. It is hosted by Green Columbus and ARTillery on the beautiful 88 acre Franklin Park Conservatory area. It'll have local bands and art, good food and drink, kids' activities, educational presentations, movies, announcements by dignitaries (and others), presentation of the [Earth Day Challenge Cup](#) awards, and more.
- **SPREAD THE WORD** – It's just not fair to keep this much awesomeness to yourself. Say it loud, say it clear -- via Twitter, Facebook, newsletters, LISTSERVS, your neighbor, et al -- say it far, say it near!

We hope to see you on April 23rd at Franklin Park for the central Ohio Earth Day Celebration. The Celebration, located on the Scotts Miracle Gro Community Garden Campus just outside of the Franklin Park Conservatory, is Free and open to the public. The hours for the Celebration are 11 AM to 10 PM.

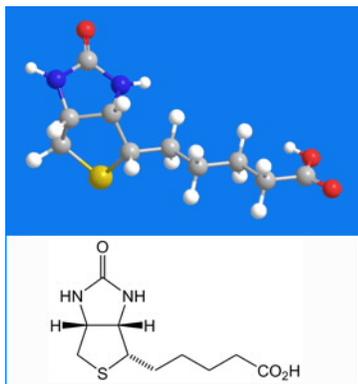
DO YOU KNOW A HERO OF CHEMISTRY? NOMINATE THEM NOW!

From the ACS Website

At the 2011 ACS Fall National Meeting in Denver, ACS will be honoring Heroes of Chemistry for the vital role these industrial chemical scientists and their companies play in improving human welfare through successful commercial innovations and products. It presents an ideal opportunity to enhance the public image of the chemical and allied industries. Each year, Heroes of Chemistry are nominated by their own companies to recognize their talent, creativity, and innovation. Previous Heroes of Chemistry have excelled in innovation at prominent international corporations and developed many commercial products that demonstrate strong financial performance. The commercial success of their products in the marketplace is an important criterion for this honor, because ACS recognizes that good business results follow good science. More information can be found at www.acs.org/industry. After reading the information in the nomination form, please consider submitting a nomination package for an individual or a team

MOLECULE OF THE MONTH

From the ACS Website



Biotin

Biotin is present in small amounts in every living cell. Bound mainly to proteins and polypeptides, it is essential for many biological carboxylation reactions. It is necessary for cell growth, fatty acid production, and fat and amino acid metabolism. Biotin was isolated from egg yolk by **F. Kögl** and **B. Tönnes** in 1936. **E. W. Tate** and co-workers recently [attached it to a post-translational cholesterylation reporter molecule](#) for purification purposes.



[More about this molecule](#) from CAS, the most authoritative and comprehensive source for chemical information.

ACS FELLOWS

From the ACS Website



Nominations for 2011 ACS Fellows are now being accepted. The deadline is **May 2, 2011**. See the [Program Guidelines](#) for complete eligibility requirements and details on the nomination process.

Purpose

The ACS Fellows Program was created by the ACS Board of Directors in December 2008 **“to recognize members of ACS for outstanding achievements in and contributions to Science, the Profession, and the Society.”**

Eligibility

Nominees must be current members in good standing with ACS. The selection of ACS Fellows is based on demonstrated contributions in two defined areas:

1. **Excellence in Science/Profession:** Could include, but is not limited to:
 - Excellence in R&D
 - Teaching or education
 - Demonstrated leadership or managerial excellence in an organization within the chemical sciences
2. **Outstanding Service to the American Chemical Society:** Could include, but is not limited to:
 - Governance service on a divisional, local, regional, national and/or international level
 - Publications, such as editor, assistant or associate editor
 - Meetings through organization of symposia or major presentations
 - Involvement in National Chemistry Week, Chemists Celebrate Earth Day, and similar outreach activities
 - Public communication by press, radio, TV or electronic media

Current members of the Fellows Selection Committee, Fellows Oversight Committee, ACS Board of Directors, and current ACS staff are not eligible to be a nominee, or primary or secondary nominator.

Nominations

- Nominations can come from an ACS National Committee, Local Section, Technical Division or an individual member.
- Each ACS National Committee may submit one nomination.
- Each Local Section may nominate up to the number of Councilors from the Local Section.
- Each Division may nominate up to two times the number of Councilors from the Division
- Each individual ACS member may nominate only one candidate.
- Self-nominations will not be accepted.

Each nomination must be submitted by a Primary Nominator and two (2) Secondary Nominators who must all be ACS members in good standing with the ACS and must each write a letter of recommendation in support of the nomination.

Steps you can take in preparation for submitting a nomination

- Identify the candidate(s).
- Determine who will be the Primary Nominator. The Primary Nominator will be responsible for submitting the nomination(s) on line. The Primary Nominator will also need to write a letter of recommendation in support of the nominee.
- Identify the Secondary Nominators (2) and ask them to prepare letters of recommendations for upload into the nomination system.
- Gather contact information for the Primary and Secondary Nominators and membership numbers as these will be required as part of the nomination packet.
- Complete the [2011 Nomination for Fellow of the American Chemical Society Form](#) for upload into the nomination system.

Selection: Fellows are selected by a broadly representative Selection Committee appointed by the Board Committee on Grants & Awards, which has governance oversight for the program.

Recognition: ACS Fellows are recognized and honored at the Fall ACS National Meetings. Each Fellow receives a lapel pin and a certificate.

Additional information on the ACS Fellows Program can be obtained by sending an email to: fellows@acs.org.

COLUMBUS SECTION ACS CALENDAR OF EVENTS

Year	Month	Date	Day	Location	Comments
2011	Jan-Dec				 <i>International Year of Chemistry.</i> See details in the March, 2009 issue of <i>The Chemical Record</i> .
2011	April	8	Fri		Noon: Deadline for reservations for April Section Meeting.
2011	April	14	Thu	The Clintonville Woman's Club	Monthly Section Meeting: <i>High School Materials Science Courses as a STEM Integrator and Motivator.</i> See details elsewhere in this issue of <i>The Chemical Record</i> .
2011	April	22	Fri	Here, There, Everywhere!	 <i>Chemists Celebrate Earth Day.</i> Stay tuned for information on Columbus Section activities and volunteer opportunities!
2011	May	3-5	Tue-Thu	Pennsylvania Convention Center, Philadelphia	<i>Chemspec USA, The Fine and Specialty Chemicals Connection.</i> See details at http://www.chemspecevents.com/usa/symposium .
2011	May	7	Sat	OSU French Fieldhouse	 State Science Day. Volunteers are needed to serve as judges. Contact Bob Kroshefsky , bobkro@embarqmail.com .
2011	June	8-10	Wed-Fri	Indianapolis	 42 nd Annual Meeting of the Central Region of the American Chemical Society. See details at http://cerm_regional.sites.acs.org/ .
2011	Aug-Sept	8/28-9/1	Sun-Thu	Denver	242 nd ACS National Meeting and Exposition
2011	October	16-22	Sun-Sat		 National Chemistry Week. Stay tuned for information on Columbus Section activities and volunteer opportunities!
2012	March	25-29	Sun-Thu	San Diego	243 rd ACS National Meeting and Exposition
2012	August	19-23	Sun-Thu	Philadelphia	244 th ACS National Meeting and Exposition

ABOUT *THE CHEMICAL RECORD*

The Chemical Record, official newsletter of the Columbus Section of the American Chemical Society, Inc., is published monthly, February-May and September-December (eight issues per year.) Opinions expressed by editors or contributors do not necessarily represent the official position of the Columbus Section or of the editorial staff. We welcome your contributions to your *Chemical Record*. Please submit them via postal or electronic mail to **George Greene**, PO Box 360941, Columbus, Ohio 43236-0941, george.greene@abbott.com. Electronic mail contributions should be in MS Word file attachments (preferred) or plain-text messages. *Thank you very much!*

CHANGE OF ADDRESS

Changes in postal or e-mail address should be reported to the Membership Chair, **David Speth**, 614-688-5162, drspeth@sbcglobal.net. David will forward the change-of-address information to ACS Headquarters.

ADVERTISING RATES

Advertising rates for *The Chemical Record* are as follows (per single insertion): Full Page, \$250; Half page, \$150; Quarter Page, \$120; Eighth Page: \$60; Business Card, \$50. Discounts: 5% for four insertions or 10% for eight insertions during a calendar year. There is no charge for "help wanted" ads.

SECTION E-MAIL ROUTING

Please send items for distribution to the Section e-mail list to **Maria Rosenthal** (mrosentha@cas.org). Maria will perform any necessary formatting then she will forward the message to **Robert Bird**, Electronic Communications Coordinator, for distribution. If you would like to be added to the e-mail distribution list, please contact Robert Bird (rbird@cas.org).

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